CONSUMERS' GUIDE

MAY 1, 1940

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THERE ARE TWO NEW COLORS in the drug and cosmetic rainbow. Unromantically named, they are D and C Green No. 8, and D and C Red No. 39.

No swain is ever going to sigh to his amour that her hair is the color of D and C Red No. 39. But the chances are that D and C Red No. 39, when dabbed on her lips as lipstick, may inspire him to say something.

The two new colors have just finished a thorough testing period in the laboratories of the Food and Drug Administration. After subjection to every relevant scientific test there is, it has been decided that the two new colors are safe for use in drugs and cosmetics. That's what the "D and C" stand for: D for drugs, and C for cosmetics. The numbers serve to identify the particular color.

Guinea pigs assisted in the tests used on D and C Green No. 8 and D and C Red No. 39. First the colors were injected underneath the skin of guinea pigs for 10 consecutive days. Then the guinea pigs were given a 2 weeks' rest and the injections were repeated. The guinea pigs took these injections in their stride, without whimpering or showing any adverse effect, except perhaps to color up inside a little. The colors passed their first test.

Next 3 sets of white rats were established in a laboratory housing project. The first set of white rats got a normal diet, the second set got a normal diet plus D and C Green No. 8, while the third set got a normal diet plus D and C Red No. 39. This went on for 14 weeks, with the Food and Drug pharmacologists keeping a sharp eye on the rats all the time, and charting the food consumption and growth of the rats each week.

At the end of the 14 weeks, the D and C Red rats, the D and C Green rats, and the rats on normal diet all were thriving to the same degree. That meant the colors had passed another test.

Next episode in this series of animal adventures was a regime of feedings with a stomach tube. A large number of rats and mice were dosed with D and C Red and Green by means of a stomach tube. The results again showed that, used this way, the colors were still safe and harmless.

In the meantime, other studies were proceeding, too, all of them designed to test the safety of these colors when used to tint drugs or cosmetics.

In the end, the Food and Drug Administration laboratory workers convinced themselves that the new colors were safe. Thereupon the Department of Agriculture added them to the list of coal tar colors which may be used in the manufacture of drugs and cosmetics.

Of course, the approval of these colors is only a general license for drug and cosmetic manufacturers to use them. But before any colors, made up according to the approved formulas for them, may be used in drugs or cosmetics, samples from each batch of the coloring matter manufactured must be submitted to the Food and Drug Administration for certification.

All this work is done under the provisions of the Food, Drug, and Cosmetic Act of 1938 which apply to coal tar colors. These sections require that the Food and Drug Administration must certify as harmless and suitable for use batches of all coal tar colors used in food, drugs, or cosmetics which enter interstate commerce.

CARRIED AWAY BY, IF NOT CARRIED BACK TO, old Virginia, a New York corporation sold its Chicago corned beef hash and its Maryland processed deviled ham, as Virginia corned beef hash and Virginia deviled ham.

To make the Virginia illusion credible, this company maintained an office in Richmond, Va., from which all of its invoices were mailed.

It also supplied stickers to go on menu cards in drug stores and restaurants which said that Virginia corned beef hash and Virginia deviled ham were featured there.

Since the home town of the hash was Chicago and the home town of the ham was Cambridge, Md., the Federal Trade Commission ordered the company to stop using the name Virginia, to stop the use of the Richmond, Va., invoices, and to stop representing that its products were Virginia products unless they came from animals grown in Virginia and, in the case of ham, unless they were cured by the Virginia process.

Both of these meat products were U. S. Inspected and Approved, as they must be, by law, to enter interstate commerce. And as all labels for meat products in interstate commerce must be approved by the Department of Agriculture, these labels had also been approved.

The Department of Agriculture did not go behind the label; its power of approval is limited only to approving the way in which a label is phrased and designed. The truth of label is the manufacturer's responsibility. In the event that he says something untrue, he is liable to prosecution.

In this case, when the facts were ascertained, the Department of Agriculture withdrew its approval of the offending labels.

CONGRESS NEEDED only 13 words to outlaw misleading or deceptive containers of foods, drugs, and cosmetics from interstate commerce. It shall be illegal, Congress said, in the 1938 Food, Drug, and Cosmetic Act, for any one of these products to cross State lines "if its container is so made, formed, or filled as to be misleading." This part of the Act became effective on June 25, 1939.

So well have manufacturers of foods, drugs, and cosmetics cooperated in enforcing this provision of the law, that some misleading or deceptive containers, many of which found their way to food and drug counters only a few months ago, are today so rare as to be almost collectors' items.

The Food and Drug Administration has the power to define standards of fill for food containers. Packages of foods that fail to meet the prescribed standard must declare that fact on their labels. The law does not grant the same power to set standards of fill for drugs and cosmetics. Only if the Food and Drug Administration finds the container of any one of these products is deceptive or misleading can they take steps to make it shrink to proportions.

On pages 10 and 11 of this issue we attempt to picture 10 different products whose containers have been changed since this part of the Food, Drug, and Cosmetic Act went into effect. Even though consumers now have a better chance of judging the contents of what they purchase by the appearance of the container, smart consumers still *read the label* and *compare the net contents* of different containers.

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Sleeping on Surplus Cotton

A new Federal Surplus Commodities program channels part of the cotton surplus into mattresses to make sleeping a little more comfortable for some low-income families

BED BEING THE PLACE where an ordinary human being spends anywhere from one-third to one-half his life, it's not surprising that some attention should be paid to mattresses.

Right now in hundreds of counties through the South the small fry of a number of farm families are standing around in high school gymnasia, church club rooms, city halls, and other places, cheering on their papas with a "Whack it, Dad." At the moment, with the coat and vest of his store clothes hung up in a corner, Dad is wielding an instrument that looks like a baseball bat on a mattress that is laid out on a table while Mamma and the children watch. He is putting the finishing touches on a mattress the whole family has made out of cotton and cotton ticking furnished by the Department of Agriculture's Federal Surplus Commodities Corporation.

There isn't an official slogan for this program, but it could be: "Let's sleep comfortably on at least a corner of the cotton surplus."

A small part of America's surplus cotton (on July 31, 1940, it is estimated there will be 9½ million bales of American cotton above normal requirements for the year) is now being turned over to American farm families who can't afford to buy mattresses so they can make their own.

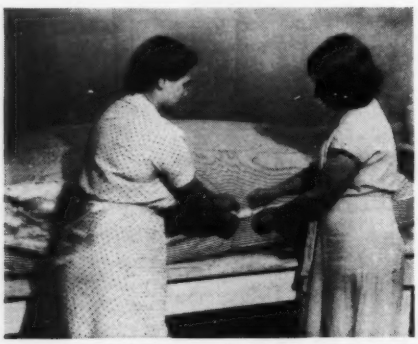
UNTIL VERY RECENTLY THE ONLY STATISTICS available about mattresses were the kind ordinary people compile while they count sheep. In 1935–36, however, a number of Government agencies including the WPA and the Bureau of Home Economics undertook what was called the Consumer Expenditure Study. With the aid of thousands of field workers and the cooperation of more thousands of American families, an attempt was made to find out how American families actually spend the money they earn.

Poor families, it was learned, have no bed of roses if it's bedding you're talking about.

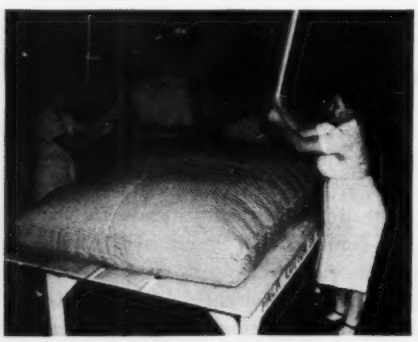
If yearly purchases of mattresses are any indication, the bedding situation of families in small cities with incomes of less than $500 annually was less than a third as rosy as that of families with incomes of $1,500 to $2,000. Thus 3 out of every 100 families with incomes of less than $500 bought mattresses during the year 1935–36, while 11 out of every 100 families with $1,500 to $2,000 incomes bought mattresses in the same year. Among farm families, 4 out of every 100 with $500-and-less incomes bought a mattress, while 9 out of every 100 in the $1,500 to $2,000 class made such purchases.

Nor is that the whole story. While the

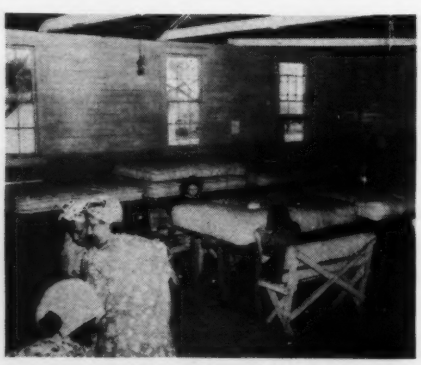
Farm families pack 50 pounds of FSCC cotton, layer by layer, into 10 yards of 6-ounce cotton ticking in the first step on the way to a new double mattress.



Once the ticking is stuffed with cotton and batted lightly to make the fibers interlock and to distribute the cotton evenly, the women in the farm families pin up the ticking.



The strong-armed member of the family takes hold of a broomstick and gives the mattress a thorough beating. Roll edges are sewed up, the mattress is beaten again, tufts are sewed in, and then the mattress is ready to go home.



Next step in the make-yourself-a-mattress program is to sew up the ticking.

poorer families (everyone really knows this without ever thinking about it) bought far fewer mattresses, they spent far less per mattress. Among farm families for example, the families with incomes of $1,500 to $2,000 spent an average of $16 for an innerspring mattress, and $7.62 for a non-innerspring. The families with incomes of less than $500 slept on mattresses (when they slept on bought mattresses at all) which cost an average of $9.76 for an innerspring and $4.17 for the other kind. Of course a larger proportion of innerspring mattresses was purchased by the families at the luckier level of income.

AFTER RUNNING THESE STATISTICS, AND more like them, through the tabulating machines, and after miscroscoping them for whatever meaning they had, economists came to the conclusion that any program that could give mattresses to people with low incomes would add to the comfort and well-being of these families without affecting the ordinary commercial market for mattresses at all.

Such a program, in fact, has been in operation for most of 7 years for families receiving public assistance. Since October 1933, the Government has turned over to Federal, State, and local relief agencies 260,000 bales of cotton—that's 130 million pounds—to be made into mattresses and comforters. Some of the families mattressed and comfortered by this cotton are rural families; more of them are city families.

WITH AMERICAN COTTON SUPPLIES THIS year the second largest ever, the economists turned their spotlight on other families—those not necessarily dependent on public assistance but shackled nevertheless to a miserable standard of living by meager incomes. More than a million nonrelief farm families, in 1935–36, were struggling along on incomes of less than $500. To provide a mattress apiece to all these families is beyond the resources available for such a program. Funds for financing it must come from the Federal Surplus Commodities Corporation which gets 30 percent of the customs receipts for programs to increase the distribution and use of surplus farm programs. These monies are being used in many different ways in an effort to get price-depressing surpluses of various kinds into the hands of handicapped families. Only a part can go to one commodity.

A stamp plan to stimulate greater purchases of cotton goods is one way the FSCC is tackling the problem of mountainous supplies of unused cotton. Families getting public assistance in a few cities will soon be benefiting from this plan.

NOW COMES THE NEW HOME MATTRESS-making program, directed specifically to farm families with total incomes of less than $400 a year whether they receive relief or not. These families, in the counties where the program is in effect, have been invited by the Department of Agriculture to take part. The program is designed to supply each participating family with a 50-pound cotton mattress of good material and workmanship, large enough for a double bed.

Materials for mattresses—baled cotton and cotton ticking—are purchased on the open market by the FSCC. Since there is a shortage of cotton suitable for mattresses on the market, however, the cotton financed by the FSCC is traded for suitable cotton with the Commodity Credit Corporation, a Federal loan agency which lends money to cotton growers on cotton. Many loans were not repaid, and consequently the Commodity Credit Corporation is amply supplied with good mattress cotton.

Home mattress-making programs have already started in the South. In these programs, councils of farm wives take over the job of getting enough support for the program in a county to get it going. They scout up a place where mattresses can be made. They round up sewing machines for the mattress making. They organize mattress-making bees so everyone will have a good time at the same time the work is pushed through.

AT LEAST 120 ELIGIBLE FAMILIES IN A county must apply for mattresses. Then the committee working on the mattress program submits an order for the necessary cotton and ticking through the local Agricultural Adjustment Administration Committee (which is elected by the farmers in the community who are cooperating in the farm programs). Whether or not a nonrelief family falls in the income class with a gross of less than $400 a year is determined by the AAA committee, since the committee already has this information for use in the operation of the farm program. Farm families getting Federal assistance are certified by the Farm Security Administration.

The AAA passes the application for cotton and ticking along to the FSCC which ships as much cotton and ticking (in units large enough to make 120 mattresses) as has been ordered.

Families may make their own mattresses, or, as is the case more often, a group of families may come together and make all their mattresses at one time in one grand mattress bee.

THE MOST CONVENIENT PLACE TO MAKE mattresses, it has been discovered, is a high-school gymnasium. The tiers of seats around the gym are admirably suited for fluffing the cotton. As the cotton is pulled out of the bales, the matted fiber is pulled apart by hand and laid out on the rows of seats. While the men and children fluff the cotton and lay it out, the women sit at sewing machines cutting and sewing the ticking, 10 yards of it for each mattress, following the instructions worked out by Extension workers.

After 24 hours of airing on the tiers of seats the cotton is ready to be gathered up and put in the ticking. The ticking, its side pieces sewed to the bottom, is stretched out on a table. Then the cotton is weighed out in 3- or 4-pound handfuls and is laid into the ticking in even layers. As each new layer of cotton is placed in the ticking, the women working on the mattress go over it carefully to see that the cotton is packed in evenly and to make sure there are no thin places. Before a new layer is added the cotton is batted lightly with a stick which fluffs it and makes the fibers knit together.

By the time the entire 50 pounds of cotton are piled up in layers the cotton has fluffed up into something that looks like an oblong snowdrift on the table.

Now the women begin to sew the cotton up inside the ticking. First they pull the ticking over the puffed cotton and pin it down. Then, stitching spirally with a heavy thread and a needle the size of sailmakers', wearing gloves to protect their hands, they begin on the last laps of their mattress making. Sometimes the men, working under the careful scrutiny of their wives, do the sewing here.

Once the ticking is sewed up, however, the men definitely get their turn. They are handed a yardstick or a broomstick, and while everyone gathers around to watch, they start beating the cotton.

In the next operation the men and women cooperate. While the women trace out the stitches to be taken, the men work with a heavy needle, stitching up the roll edge. Tufting begins at this stage, though in many counties tufting is dispensed with. Then the mattress is beaten soundly again on both sides. The job is done now, and the mattress is ready to go home. Mattresses and families are packed into cars or wagons, and off they go, waving good-bye to their neighbors.

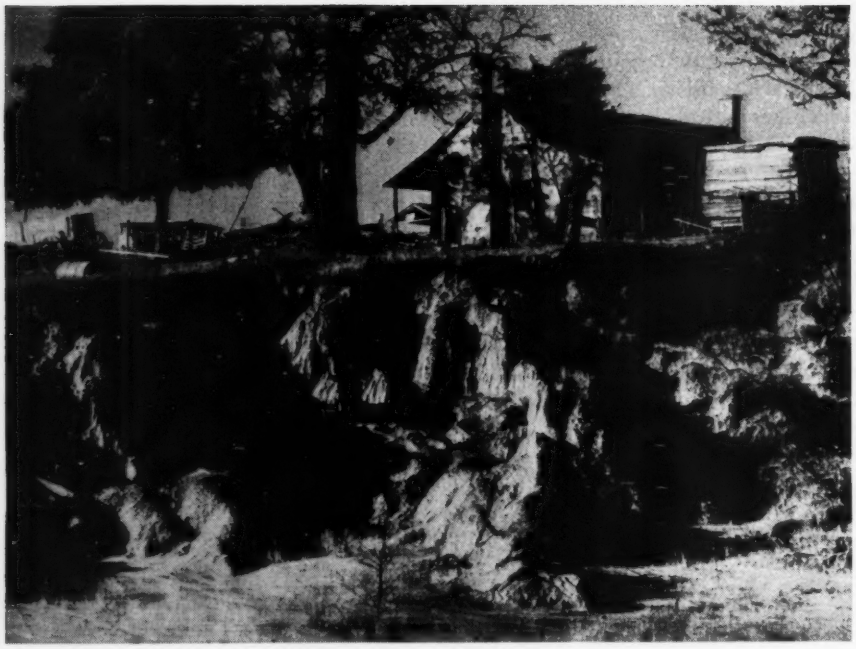
"MAKE YOURSELF a mattress out of the cotton surplus" reads an invitation sent out recently to America's low income farm families by the Department of Agriculture. The Triple A furnishes administrative supervision, the FSCC furnishes the cotton and ticking, the Extension Service gives technical advice, and the farm families do the work.

Every day for 2 weeks after that the mattress is beaten at home, sunned and turned. Finally, unless a family decides to cut a corner earlier, the mattress is ceremoniously laid out on a bed. Extension workers estimate that these mattresses would sell for $20 or $25. The actual material cost of each of these mattresses is about 6 dollars, 10 cents per pound for the 50 pounds of cotton they contain, and about 10 cents per yard for each of the 10 yards of cotton ticking necessary to make a double mattress. While they don't conform exactly to careful specifications for store mattresses (the ticking, for example, is only 6-ounce ticking while mattress experts recommend a stronger 8-ounce ticking), the thorough hand labor that's put into them makes up for these deficiencies.

SKEPTICS MIGHT OBJECT THAT MATTRESS-making bees are okay, but what happens to the mattress industry when the town turns out to make its own mattresses? Actually the people in the bedding industry benefit from the program. First, the people who make their own mattresses are people who, in the main, can't afford to buy cotton mattresses or enough cotton mattresses. That means the mattress project should not cut into mattress sales. Furthermore, reports indicate that the mattress making increases mattress sales. All the people who aren't out making mattresses see the mattress furore, and they themselves become mattress conscious. In effect, the campaign constitutes an advertising program for mattresses in general.

The sleeping-on-the-surplus campaign, however, has a meaning that goes farther than the mattress materials it gives free or the advertising it is giving to bedding. It fires a shot right in the bullseye of a problem that's been worrying America worse than a bad conscience—how so-called surpluses of farm products can be got to people who have deficits of these same products. In the case of cotton, very often, farmers with warehouse receipts for cotton in their pockets can't afford the finished cotton products they need.

Both the food stamp plan and the cotton stamp plan go at this problem from one direction. And now the mattress program is here to indicate that still more progress is being made. Maybe the time is coming when stamp plans and mattress programs will have done their work so well that most everybody will be able to get a good night's sleep. That will be when an antidote has been found for what the President of the Federal Surplus Commodities Corporation has called the Black Plague of the Twentieth Century—underconsumption.



Conservation Question Box*

To save soil for tomorrow's consumers, to build the basis for a more prosperous agriculture, to lift the face of America . . . farmers and Government are pulling together in a program of conservation

WHAT ARE SOIL EROSION and soil depletion, and leaching?

Erosion is the gradual wearing away of the land surface by wind, water, and gravity. The earth, undisturbed by men, weathers, and ages in a process called *geologic erosion*. This is distinguished from accelerated or soil erosion which is induced by man. The rain washes the soil, the wind blows it, under the pressure of gravity it moves down hill. But while the top soil is weathered away in geologic erosion, the rock underneath is weathering and crumpling into dust, building up soil. When the top soil is blanketed with grass, held fast with the roots of trees, umbrellaed from the rain by forest leaves, topsoil wears away less rapidly than when wind and water are allowed to lash its face.

Soil erosion is the name given to the man-made speed-up of the wearing-away process. By tearing away the forest, grass, and root-woven clothing over the land, men expose the topsoil to the peeling of the wind, and to the shearing, cutting drive of the rain. When the soil is washed away from the land by rain the process is called *water erosion;* when it is blown away, the land loss is called *wind erosion.*

Nitrogen, a most important plant nutrient, in some of its forms dissolves readily in water. When the rain washes over the fields, the plant foods drain off with the water even when soil is not washed away. This dissolving out process, which saps the land of its strength, is known as *leaching.*

Soil depletion is the term farm experts use to describe the mining of plant nutrients from farm lands by farming. Unless these nutrients are returned to the soil, eventually a farm becomes as exhausted as a mined-out coal shaft.

Each year it is estimated 6,500,000 more tons of nitrogen are mined out of the nation's farm land than the amount that is returned to it. The net loss of phosphorus is some 2,000,000 tons. Similar quantities of calcium, potassium, and other chemicals essential to life are lost.

IS SOIL EXHAUSTION A PROBLEM ONLY IN THE UNITED STATES?

No, soil exhaustion is as old as agriculture. Parts of the Sahara Desert in Africa and of the Gobi Desert in Asia once were fertile lands where shepherds tended their flocks and farmers reaped harvests of grain. The Queen of Sheba's rich capital city was recently exhumed from hills of sand piled upon it by erosion. Similarly, more than 500 cities flourished once on the plains of Asia Minor where today an occasional traveler sees only windblown dry wastes.

DO WE HAVE A SOIL-EXHAUSTION PROBLEM PECULIAR TO THE UNITED STATES?

Yes, we do.

The land laws during the nineteenth century led families to settle on land which should never have been cultivated. Knowing less than is known today, the Government offered homesteads that were too small to be farmed efficiently. In the '80's a cynic commented that the Federal Government bet a family it couldn't live on a homestead for 4 years, and most often the Government won.

Grazing areas deteriorate unless they are managed in large units. Cutting range land up into small family parcels leads to overgrazing, and the eventual destruction of the topsoil.

Speculators in land took advantage of the land laws, and feeding on the people's eagerness to settle the West, they sometimes subdivided the land into too many small units, and sold land for farming purposes that should not have been farmed at all.

Speculation in land also led to the generally held belief that land was a source of quick wealth. But land bought for the purpose of getting rich quickly is usually overpriced, is generally overworked, and sometimes is rapidly abandoned.

Inheritance laws accented heavily the tendency of American farmers to till farms that were too small. As land passed on from generation to generation farms were divided up between children, often in a way that turned one good farm into two or three bad farms.

Farm tenancy is another factor which gives soil erosion in the United States a twist of its own. About 42 percent of American farmers are tenants, and a large part of the rented land is owned by absentee landlords. Leases between landlords and tenants in the past were not the kind which made it worthwhile for tenants to improve the land they rented. Landlords wanted immediate cash returns, and gave no credit to tenants who spent money and time for soil-building prac-

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* *This is the second of a series of four articles on soil conservation. The first appeared in the April 15, 1940, issue of CONSUMERS' GUIDE.*

tices which did not begin to pay at once. Tenants who had no reason to believe they would continue to live on a farm longer than a couple of years did not see why they should work hard and deny themselves to build up land for the tenants who were to follow them. Soil conservation made its inroads between the divided interests of landlord and tenant.

Cash cropping, the method of farming by which farmers depend on raising and selling one crop for cash, forced farmers, in order to keep up their incomes, to work their land as hard as possible. Since they had to have cash to live, they could not forego an immediate cash return, in the hope of getting larger returns in the distant future. When hard-driving farming practices reduced crops, farmers were forced to push the tired land even harder to make ends meet.

When farm prices swing wildly up and down from year to year, farmers overwork their soil in good price years to recoup their bad years. In bad years they overwork their land just to keep up their necessary cash payments. Farm mortgages placed at high interest rates when land is overpriced, require regular cash payments, and put a constant pressure on farmers to extract every last cent from the soil they can get.

Clean tillage, that is the growing of row crops, is also a typical American farming practice. It arose because these crops were most immediately profitable in cash.

Timber slashing, not by farmers, but by lumber companies, laid waste great areas, and added to the harvest of flood and erosion.

For all these single factors, which together made up an American attitude toward the land, no one person, no one economic interest, no single group of people is responsible. Altogether it was an American frame of mind in a particular American era which was at fault (or perhaps not at fault, because it was this attitude which peopled the West). At any rate, today the attitude has changed. The soil is no longer a gold-bricked source of quick wealth. It is the trust this generation holds for the next.

NOW THAT EVERYONE IS ALIVE TO THE IMPORTANCE OF SOIL CONSERVATION, WHAT'S BEING DONE ABOUT IT?

People have become slowly aware of a national conservation policy over a number of years. President Grant, in 1875, sensed the defects of the homestead laws. During President Theodore Roosevelt's administration particular attention was paid to the conservation of timber and mineral resources. Over the years, as the returns came in from farmers on the land, gradually a positive national conservation policy has been shaping up.

Perhaps 1940 will be the year historians will select as one in which one era definitely ends and another begins. For the year 1940 the Secretary of Agriculture has announced that all the farm programs now being administered by the Department of Agriculture are to be coordinated to insure the most efficient possible conservation of soil, forests, and human beings.

"Land is still wearing out faster than we can restore it," the Secretary of Agriculture said, . . . "As a nation, we have not yet succeeded in holding our own in the conservation battle."

WHAT ARE THESE NEW POLICIES?

Before answering that, you ought to know what the Federal Government has been doing up to now. Then you will understand how the new policies differ from past practices, and why their inauguration is so decisive at this time.

WHAT FEDERAL AGENCIES WORK IN THE FIELD OF SOIL CONSERVATION, WHAT DO THEY DO, AND WHAT LAWS DO THEY OPERATE UNDER?

The Agricultural Adjustment Administration was first created during the emergency of 1933. Industrial depression and low farm prices produced a terrific pressure which ruptured all the weak places that had developed in the farm economy over many years.

Triple A was designed to lift farmers out of bankruptcy by raising the prices of farm products and to adjust the production of those crops whose periodic superabundance disorganized farm prices.

These crops are the same crops whose production wears out the soil, such as corn, cotton, tobacco, wheat.

By adjusting production of these crops the first Triple A advanced soil conservation by making more land available for grasses and other soil-conserving crops.

SOIL CONSERVATION

GRASS can heal the damage over-cropping does to the land. Alternating strips of grass between plots planted to row crops act like dams on the land and shore up farms against run-off and erosion. This is called strip-cropping.

The Supreme Court decision in 1936 hastened the adoption of a national farm program based primarily on conservation. Congress in 1936 amended the Soil Conservation Act of 1935 to provide for the new approach, and this Act was strengthened in 1938 by the Agricultural Adjustment Act.

Bolstering farm income continues to be a major purpose of the Triple-A program. Devices for achieving this are: (1) Determining acreage allotments for soil-depleting crops, like wheat, corn, tobacco, cotton, and rice; (2) establishing marketing allotments when acreage adjustment proves insufficient; (3) lending money on crops and providing for the Ever Normal Granary; (4) making parity payments when farm prices, in relation to city prices, are too low; (5) steadying the seesaw in farm prices through marketing agreements.

Hoisted, now, to top-ranking position with other objectives of the Triple A is better and more far-reaching conservation of the soil. Farmers are not only shown how to conserve but are helped to put knowledge into practice through payments which can be earned by adopting or improving soil-building practices, such as rotating crops, diversifying farms, planting trees, terracing fields, contour ploughing, repairing gullies, building reservoirs, adopting approved fertilizing methods, sowing land withdrawn from soil-depleting crops to crops which rebuild the fertility of the soil.

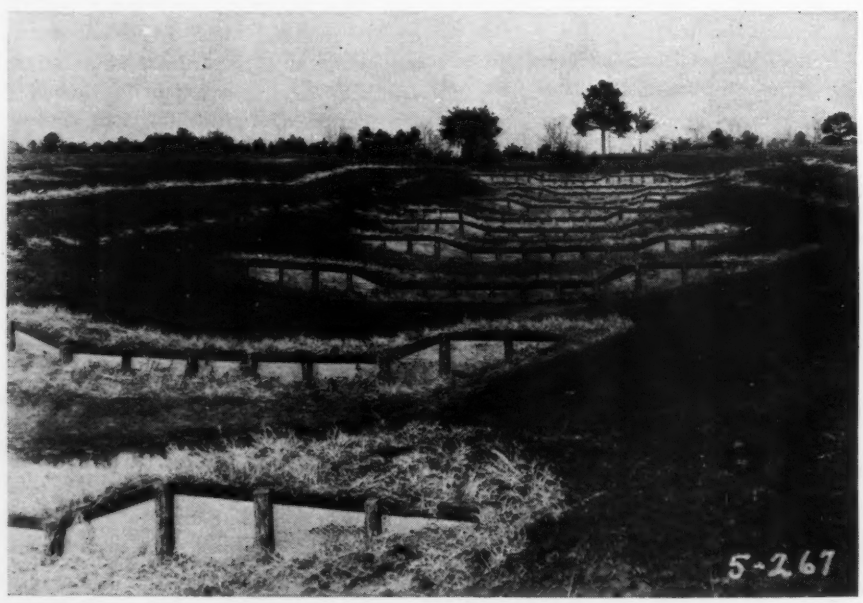
HOW DOES THE NEW CONSERVATION POLICY AFFECT THE TRIPLE A?

First, the schedule of payments farmers may earn for cooperating in soil conservation is changed so as to encourage them to redouble their efforts to save soil. The new policy does not reduce the amount a farmer may earn, but it changes the requirements for earning it.

Planting alfalfa in fields formerly used for growing corn, for instance, is a soil-enriching thing to do. Last year, a farmer who planted alfalfa could earn 2 credits toward a "performance payment." This year, he may earn not more than one credit for doing the same thing. The idea is that this farmer, in order to earn the extra credit, will plant additional alfalfa or give his soil some extra care, such as terracing.

Some farmers are already good practicing conservationists. Instead of rewarding them for doing what they might be able to do anyway without reward, payments are geared to induce them to improve their practices still further.

TERRACES spread their fingers out over the rolling earth to hold back rain water instead of letting it race off the land carrying valuable topsoil with it. The water remains for the crops, and the topsoil stays put. The gully shown below has been stopped in its tracks. Dams built across the wash stop further erosion, while hardy grass planted around the dams starts to work rebuilding the soil lost by gully erosion.



In short, conserving soil wins rewards both for the farmer who is a practicer of conservation and for the farmer who can be induced to begin. Practically no farm is so perfectly run now that there is no room for improvement.

These conservation payments require funds. Congress has appropriated funds to cover all types of payment under the farm programs. The new policy must stay within the limits of these funds. But to make the tug toward better farming practices stronger, the proportion of funds available for soil-building practices has been increased somewhat.

Another important feature of the new policy is its encouragement to small farmers. Conservation policies are hardest to carry out on small farms where farmers have less money to work with and a smaller area in which to work. The new program guarantees a minimum payment which may be earned for approved practices no matter how small the farm.

Under the Triple A, farmers themselves administer the program through their elected committees. Within the limits, top and bottom, on payments and practices, these committees decide which practices shall be rewarded in their counties, and they are the judges as to whether Farmer Brown has earned any payments. These committees check carefully on Farmer Brown's performance before they certify him to receive his Government check.

New policies, such as these, will mean a more fertile America, but they could not have been put into practice without a preliminary period in which farmers learned by experience the necessity for saving soil. Even now, intensive educational campaigns are being conducted to help farmers see that it's smart to conserve.

WE MUST WATCH OUT LEST CONSERVATION of our physical resources be pushed with full regard for the loss of dollars flowing off and down our streams, but no primary regard for wasted humanity. It is selfishness that has destroyed our natural resources, and to plead for conservation merely to stop the loss of dollars is to appeal to the same selfishness that wrought the destruction.

"It is only when human beings become the primary objective that conservation becomes the highest national virtue. Conservation can never become our master plan except as a nation's restitution for a great wrong done—not only to land, but to people."—*Henry A. Wallace, Secretary of Agriculture.*

Guaranteed to Perform as Labeled

Rules on labeling of agricultural and vegetable seeds help consumers to know what they may expect from their purchases

IN A BASEMENT corner of the Department of Agriculture, out of sight of the passerby, there is a room that appears to be a bakery in miniature. Tiny ovens line one wall. If you placed your hand on the oven doors, you would find that some of them are warm. Pull out one of them, and you will see—not bread—but green and white heads poking out of a magic soil formed of paper toweling or blotting paper.

You ask an attendant what it's all about. He tells you he is germinating some seeds to find out how many in a given quantity will actually grow into normal sprouts. Again you ask why, and you're told that every batch of seeds that comes into the country must measure up to a legal standard of performance and every batch of seeds sold across State lines must measure up to the standard of performance indicated on the label.

IF YOU ARE THE KIND OF CONSUMER WHO wonders why the goods you buy are not labeled with a guarantee that they will perform as labeled, you may ponder on the great good fortune of farmers who buy seeds.

Here is a product for which minimum standards of performance have been defined. Here is a product (when sold in interstate commerce or coming from abroad) which is required by law to be labeled so the purchaser will know whether the product measures up to, or falls shy of, these standards. Here is a product for which standard methods of testing have been evolved, methods which are recognized alike by the trade and by Government as scientific. Finally, this is a product which, if misbranded will be seized by the Government and its distributor will be penalized.

BACK OF ALL THIS IS A LAW. IN 1912, CONgress passed a law requiring that seeds be properly labeled. That statute had its loopholes. But last year, Congress passed a new seed law closing up the holes and providing the buyers of seeds with much greater protection. Now the buying of seeds can be done with discrimination and knowledge by anyone who takes the trouble to study the label.

Objectives of the law are few and simple.

First, the law applies only to vegetable seeds and to "agricultural" seeds—such as field crops like cotton and alfalfa, grasses, oats, and wheat. Lawn seeds, which city consumers buy, are considered "agricultural seeds." Excluded from provisions of the act are flower and tree seeds.

The act divides all seeds purchased into 2 classes. There are specific provisions for seeds as they are imported into the country. And there are other rules for seeds either imported or produced domestically which cross State lines before they are purchased by the ultimate consumer.

For seeds that come from abroad, both agricultural and vegetable, definite standards of quality and of performance are established, and no imported seeds may be released for sale unless they meet these standards.

STANDARDS OF QUALITY AND PERFORMANCE require that imported seeds contain a certain percentage that will sprout. Every time a shipment reaches an American customs office, samples are rushed to the Department of Agriculture in Washington where the quality of the seed is checked. If found to be below standard—as has many times happened—the seeds either go out of the country or they are processed to improve the quality.

No more than 2 percent of weed seeds are allowed, while only 4½ to 45 seeds of so-called "noxious" weeds (which are almost impossible to eradicate once they get a hold in the soil) can be included in a pound of imported seeds. The number depends on the kind of weed.

In addition, there are rules requiring the staining of certain seeds. Reason for this is to indicate to the buyer where the seeds came from, so that he can tell if the climate and soil of the country of origin match the conditions on his farm.

So much for imported seeds. As to seeds—domestic or imported—shipped across State lines, the law defines standards of performance for vegetable seeds but not for agricultural seeds. It permits substandard vegetable seeds to be sold provided they are labeled properly. It lays down rigid labeling requirements for both agricultural and vegetable seeds.

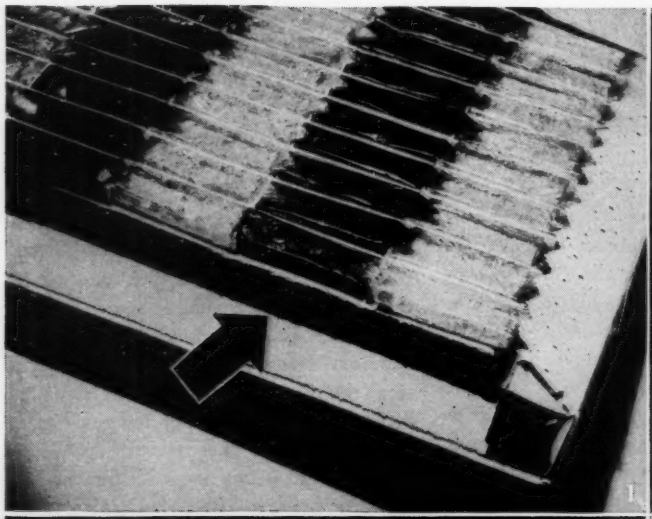
Agricultural seeds must show on their labels these facts: The percentage of seeds guaranteed to have healthy sprouts; the percentage of all types of seeds in any mixture, and also the percentage of "inert matter" and weeds; the name and address of the shipper or his code number assigned by the Department of Agriculture; the number of "noxious" seeds; the kind, type, or variety of seed; the origin of some kinds of seed; and the date of the germination test—or the test which guarantees the percentage of seeds that will grow—that is made by the producer or shipper. This last point is important. Under the law, seeds that go across State lines more than 6 months after they have been tested can be seized.

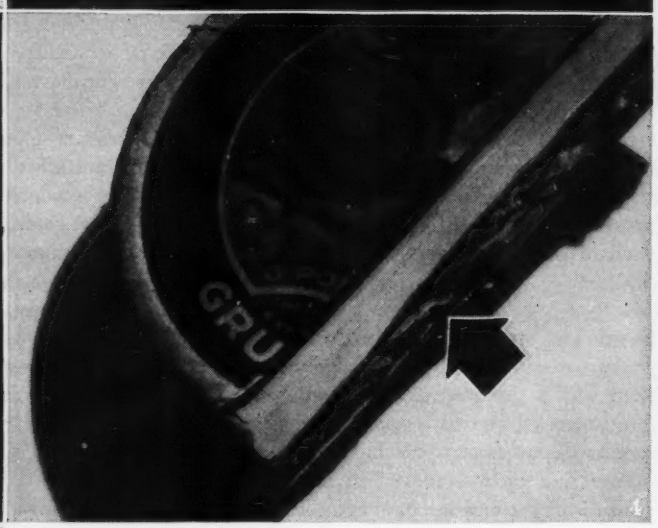
LABEL PROVISIONS FOR AGRICULTURAL SEEDS went into effect February 5 of this year. Those for vegetable seeds will become effective in August. At that time, all vegetable seeds will have to meet a standard of performance or else be labeled—in big, easy-to-read type—"Below Standard." The performance standards are the percentage of seeds in one shipment guaranteed to germinate. Seeds meeting the standard have to be labeled only with the kind and variety of seed, and the name of the shipper or the person to whom the seeds are consigned. Seeds falling below the standard

[*Concluded on page 15*]

IN HOTHOUSE OVENS like these, Government scientists determine the performance standards of seeds.

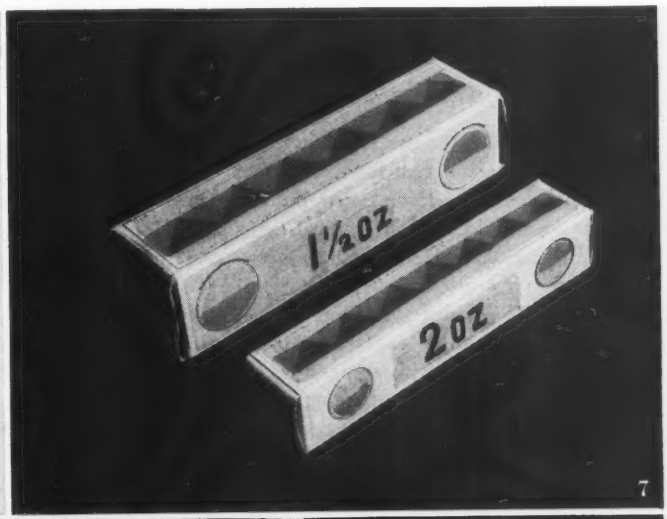
Containers: Before and After

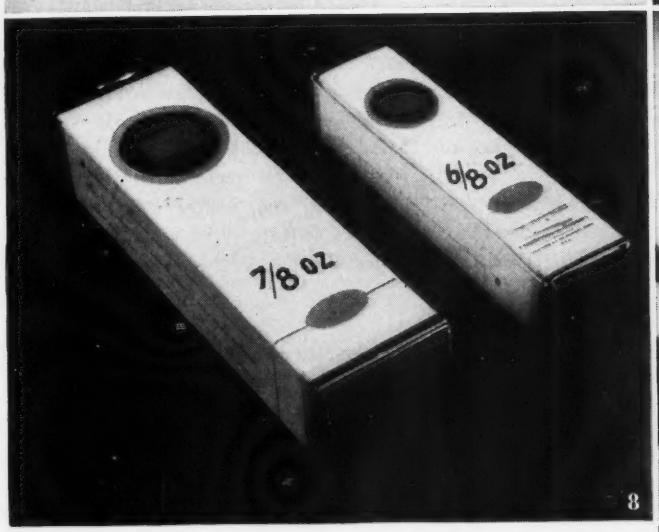




PICTURES TELL THE STORY. (1) This fancy candy box had an air space underneath the candy that was deeper than the layer of candy and gave the impression that the box held much more than it did. False bottoms, like this, are out. (2) Nutmeg was formerly packed in the box to the left which measured 11 cubic inches; the same amount of nutmeg now comes in the box to the right, measuring 9.3 inches. (3) Coffee, packed in the left-hand can, measuring 78 cubic inches, now comes packed in the right-hand can, measuring 63.5 cubic inches. (4) Here is another type of false bottom, now banned, formerly used in packaging cheese. (5) This grated cheese container has been cut down from 13.9 to 10.6 cubic inches. (6) Powder boxes, with thin layers of

a law—one of the most important to consumers—made possible these pictures which show how deception is being banished from many food, drug, and cosmetic containers





face powder, used to be deeply indented in the bottom; now deep indentations are out because they are deceptive. (7) One and one-half ounces of toothpaste used to come in the larger carton, measuring 13.5 cubic inches; now you can buy 2 ounces of the same toothpaste in a carton measuring 5.2 cubic inches. (8) Seven-eighths of an ounce of deodorant came in the carton to the left measuring 9 cubic inches; six-eighths of an ounce now comes in a carton measuring 3.9 cubic inches. (9) The redesigned patent medicine bottle (right) does away with the illusion of greater capacity given by a long-necked bottle (left) made of thick glass and capped with an over-long cork. (10) This ointment tin (left) measured 5.5 cubic inches before; now, 3.2 cubic inches.

Lard's Place in the Larder

Lard goes on the bargain counter as mountainous supplies bring down the price of this valuable fuel food

DIETITIANS call the food fats sources of energy. That makes plain the fact that fat in the diet doesn't build up tissues the way proteins do, and doesn't help to regulate the intricate apparatus inside the body the way vitamins do. Fat is to the body what coal is to the furnace. It furnishes heat. When the heat locked up in fat is not burned in the body, it is stored in fatty tissue the way coal is stored in a bin to await burning. One pound of pure fat, with its 4,080 calories, is a far richer fuel than any other kind of food.

Food fats for the most part are not solely fat. Butter, besides containing fat, contains some very useful vitamins and other constituents which give it its characteristic flavor.

For this reason all good fats are not completely interchangeable. As a source of fuel, however, they are interchangeable with slight adjustments in amount.

Lard, which does not have the vitamin virtues of butter, for example, is more than butter's equal in energy value. It also is richer in essential nutrients called fatty acids. Like butter, it is approximately 97 percent digestible. Fats are digested more slowly than other foods and fat-containing foods are also digested more slowly. Thus when these foods are eaten they give a sense of satiety, a feeling of fullness, while the sense of having eaten lasts longer.

For these reasons, lard is useful in low-cost diets. According to the Bureau of Home Economics, "A large amount of lard and other inexpensive fats in low-cost diets brings up the calories cheaply, and allows baking and frying to increase the palatability of meals." Lard, being entirely fat, with no added air or water, also goes farther than some other cooking fats. A cup less 2 tablespoons of lard is the cooking equivalent of a cup of butter or oleomargarine.

Lards differ, depending on the food eaten by the hog from which the lard comes, the part of the body from which the fats are taken, how the melted lard is rendered, and how it is cooled. Each of these factors is important in the quality of lard you get, but seldom do labels on lard containers give you information about them.

Diet of the hog affects lard quality. Lard made from the fats of peanut-fed hogs tends to be softer than lards made from the fats of corn-fed hogs. The importance of softness, or hardness, in lard is just this: Soft lards are oily and hard to distribute and combine in a batter. If you want to cream a lard in making a cake, for instance, you want a solid fat, because that creams better. If you want a lard for deep fat frying, a soft lard will serve your purposes just as well.

Where the fats come from also affects the quality of lard. Fats from the inside of the hog are somewhat harder than external fats. Again, internal fats have a higher melting temperature, and tend both to cream better and keep better than do external fats. "Leaf lard" is made from a layer of fat which is taken from the abdomen, close to the kidneys.

A third point of distinction between lards is the way they are rendered. Some are rendered in a closed, or partially closed container; others are rendered in an open kettle or by a dry melting process. Most of the lards consumers purchase are rendered in closed or partially closed containers. The basic difference between them and the open kettle rendered or dry rendered lards is that the latter have a nuttier flavor. When lard rendered by the former method is not of high quality, it has a low smoking point, which means that it is not suitable for deep fat frying. Also when it is kept over long periods of time, it is more likely to turn rancid than other types. For this reason, it should not be purchased in quantities you can't use up in a reasonable time.

Fourth major distinction in lard grows out of the way hog fats are solidified, after being rendered and permitted to settle. They may be solidified slowly, or suddenly by flowing over a refrigerated roller. When lard is permitted to cool slowly, the fats which harden at room temperature solidify first; those that solidify more slowly remain liquid on top of the hardened fat. This lard is known as "grainy" lard. When liquid lard is drained out of the settling tanks onto a refrigerated roller, however, it is chilled at once into a creamy white consistent mass. This quickly chilled lard, which hardens uniformly, is known as smooth lard.

Bakers and housewives who like to work with a soft fat prefer grainy lard, while housewives and bakers who prefer the creamier consistency of a solid fat ask for a smooth lard.

ALL LARD that enters interstate commerce is made under the direct supervision of a Federal Meat Inspector. Here fats are being trimmed from pork cuts for use in lard making.

Liquid lard must be packaged in a container of firm material. When packers prepare grainy lard for shipment, therefore, they never put it up in cartons. They run it out of rendering tanks into tubs or buckets.

AS YOU SEE THEM IN GROCERY STORES, lards are usually described in the following terms:

Steam rendered lard: Rendered in a closed tank under steam pressure. Refined steam rendered lard makes up the bulk of the lard on the retail market.

Dry rendered lard: Rendered in a closed or partially closed container without steam.

Drip rendered lard: Rendered in a closed cooker so constructed that the lard is separated from the cracklings by dripping into a lower compartment.

Kettle rendered lard: Rendered in an open kettle. (When rendered exclusively from leaf fat, it is called *kettle rendered leaf lard.*)

Hydrogenated lard is in a class by itself. It is usually steam rendered lard to which extra hydrogen atoms have been added. These extra hydrogen atoms produce a bland lard which has a higher smoking point than ordinary lard, that is whiter and which keeps long periods without becoming rancid. Hydrogenated lard, like the familiar hydrogenated vegetable shortenings, is solid at room temperature.

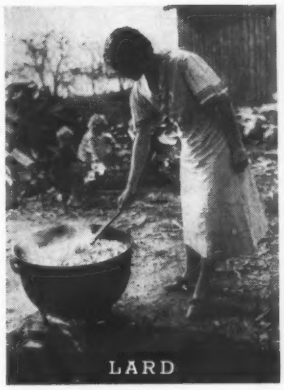
It helps to remember the different kinds of lards if you think of their relative cost and what they're good for, at the same time.

Lard is used for deep-fat frying, pan frying, and shortening.

For deep-fat frying you want a lard that has a high smoking point. For pan frying, you don't have to worry about smoking point; instead, you think about flavor. For shortening, you want a bland plastic fat that can be creamed.

Every time a fat is heated up, its smoking point is lowered. Consequently, a fat that has a low smoking point to begin with will be unsatisfactory where repeated use is necessary. Butter, olive oil, and lower grade lards which have low smoking points are not suitable for deep-fat frying. Good quality lard, however, turns out crisp french-fried potatoes and crunchy doughnuts.

COOKS WHO MEASURE QUANTITIES WITH A cocked head and a squint used to tell when the fat for deep-fat frying was hot enough by watching for it to smoke. Today home economists urge housewives to avoid hit-and-miss methods that miss as often as they hit, and to use a thermometer. When the fat temperature reaches 350 to 360 degrees, it's time to fry. For lack of a thermometer there is another method—that is to drop a cube of crustless bread into the hot fat. If it takes more than a minute to brown, the temperature is less than 350 degrees; if it browns in a minute the heat is somewhere between 350 and 360 degrees, and if it browns in 40 seconds the temperature is soaring up around 370 degrees.

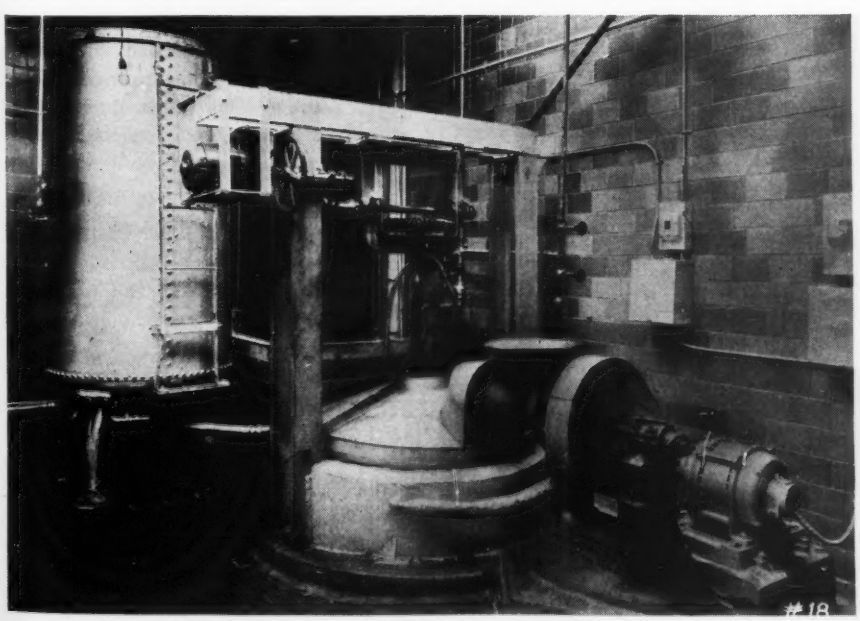


LARD

To avoid overheating the hot liquid fat, a straight-sided deep kettle is recommended. Usually, too, the smaller the diameter of the kettle the less chance there is of burning the fat. The kettle should never be filled more than two-thirds full, and under no circumstances should the fat be heated until it smokes. There is no danger from splattering if foods are wiped dry before they are dropped in the hot fat.

After all the potatoes or doughnuts or whatever it is that has been swimming in the fat, have been sieved out, the fat should be permitted to cool. Then a couple of slices of raw potato should be dropped into the cold fat, the fire should be turned on and the pan permitted to heat up slowly until the potatoes are brown. After that the fat should be strained through a couple of thicknesses of cheesecloth into a can, and then when cool, the can should be covered tightly and placed in the refrigerator.

THE HOG FATS are dumped into a hasher which minces them and (for steam-rendered lard) ejects them into a closed vat where the fats are melted into lard by steam under pressure.



CHOICE OF A FAT FOR PAN FRYING DEPENDS upon the flavor you want in the food. Ordinarily food is pan fried at low temperatures so that a housewife has her choice of lard, butter, olive oil, vegetable shortenings, or drippings. Skillet wielders here, too, should steer clear of smoke and keep the temperature of the pan down.

Shortening in the dictionary is described as fat used in baking to make pastry and cakes tender. The attribute in fat which enables it to make a cake short is its tendency to form a film of oil over the tiny particles composing the batter or dough. These oil films, like all oil films, don't get wet and don't mix with water. By separating the particles of dough into water-tight globules, the fat prevents the flour from mixing with water and forming a sticky, elastic, gummy product.

Final texture of a cake or pie depends upon what kind and how much shortening is used or how it is distributed. If it is dis-

LARD these days claims more than its share of the headlines. While shortages of fats and oils in national diets haunt the days and nights of governmental economists abroad, in the United States the quantities of lard in cold storage have risen to stratospheric heights. On March 1, 1940, for example, the amount of lard in storage set an all-time American record when it reached 258 million pounds, that is about one-sixth of the lard produced in the country during a year.

In recent years the average American has been getting about 11 pounds of lard a year in his food. What was left over was exported. During the 1920's lard exports were over a billion pounds a year, more than half of the total American production. International trade barriers and the depression pushed this figure down, and then the drought years so cut down on American lard supplies that there was little to export. Corn production came back, however, and that shot hog production up, and that set lard production skyrocketing, and put America in a position to make up the fat shortages abroad with its exports. But then the war erected the highest trade barrier yet, piling up huge stocks of lard in American cold storage warehouses. The result is low prices and hardship for the farmers who raise corn and hogs.

Determined to snatch some advantages out of this tierce of lard troubles, the Federal Surplus Commodities Corporation announced early this year that pork products, including lard, could be purchased with blue stamps. This enables needy families in cities where the blue stamp plan is operating to take the blue stamps they get free from the FSCC to their grocery stores and to buy pork and pork products, including lard, with them. To supply lard to needy families in areas where the blue stamp plan is not operating, the FSCC also purchased 34,740,620 pounds of lard in the 4-month period following December 15, 1939, for distribution through relief agencies.

When lard goes on the blue stamp list, that should light up a meaningful flare for consumers lucky enough not to need blue stamps when they are shopping. Lard is on the blue stamp list because its price is down, and smart consumers don't ignore a good food when it lands on the bargain counter.

THE RENDERED LARD is drained into settling tanks, passed through refining presses, cooled, and then squirted into packages. When the lard is permitted to cool slowly, grainy lard results; when it is quick cooled, the final product is smooth lard.

tributed in layers, you get a flaky product like a pie crust. If it is evenly distributed throughout the dough you get a fine tender texture as in a butter cake.

A good shortening for cake must also cream well. When it is mixed with the other ingredients of the dough, it must hold in air bubbles and thus permit the dough to increase in volume and to acquire a smooth even texture.

MOST COOKS USED TO FEEL THAT LARD WAS all right for bread and for spiced cookies, but when it came to cakes they steered clear of it. Lard, they said, gave cakes a strong taste and didn't cream well.

Recently, however, home economists and food chemists got to work with their test tubes and ovens in the laboratories of several midwestern universities to see if they could find out how lard might be used with good effect in cakes.

In the Iowa State College of Agriculture, workers discovered, for example, that by departing from traditional cake-mixing methods, excellent results could be obtained. One method consists in creaming the lard and one-half the sugar. Next add the flour and milk. Then beat the other half of the sugar into the egg until it is very light and fluffy. Quickly add this sugar-egg mixture to the cake batter.

Lard keeps well (hydrogenated lard best, kettle-rendered lard next best, and steam-rendered lard next) but like all fats it eventually becomes rancid. Rancidity, which comes from the splitting off of fatty acids, is hastened by moisture, air, light, or high temperatures. Lard, therefore, should be covered tightly and kept in a cool place. Since fats absorb tastes and odors readily, keeping lard covered also serves to retain the original bland lard flavor. While hydrogenated lard keeps well at room temperature, it, too, should be kept covered, like the vegetable shortenings.

TWO FEDERAL LAWS HAVE COME TO THE rescue of consumers who want assurance that the lard they buy is clean and wholesome. These are the Meat Inspection and Food, Drug, and Cosmetic Acts.

From the time it enters a slaughter house as the fat on a live hog until it finally leaves the processing plant, lard which is to be sold across State lines is subject to the supervision of the Federal meat inspection service. Ingredients which go into the lard are inspected, and the method of processing is supervised. Labels on federally inspected lard carry this legend: "U. S. Inspected and

Passed by the United States Department of Agriculture."

Like any food, lard can deteriorate if not handled carefully after it leaves the factory. Under the Food, Drug, and Cosmetic Act, lard that has deteriorated is subject to seizure if it has crossed State lines.

Protecting consumers from poor quality products is a second line of defense for pocketbooks. Here Congress holds out another hand. It has given the Secretary of Agriculture power to define standards of identity and minimum standards of quality. When a standard of quality is established, a food which falls below this standard must be labeled substandard. When a standard of identity is set, a food which fails to meet this standard may not be called by that name. Such standards have been worked out for a few foods. Right now the Federal Government and State government experts are at work examining the possibility of defining a standard of identity for lard.

Between bottom and top quality lard there is a wide spread, as all good shoppers know. No law now requires that labels tell consumers what is the quality grade of the product. The Agricultural Marketing Service in the Department of Agriculture has the power to define quality grades for voluntary use by buyers and sellers of farm products. But the development of such standards is not an overnight job.

GUARANTEED TO PERFORM AS LABELED

[*Concluded from page 9*]

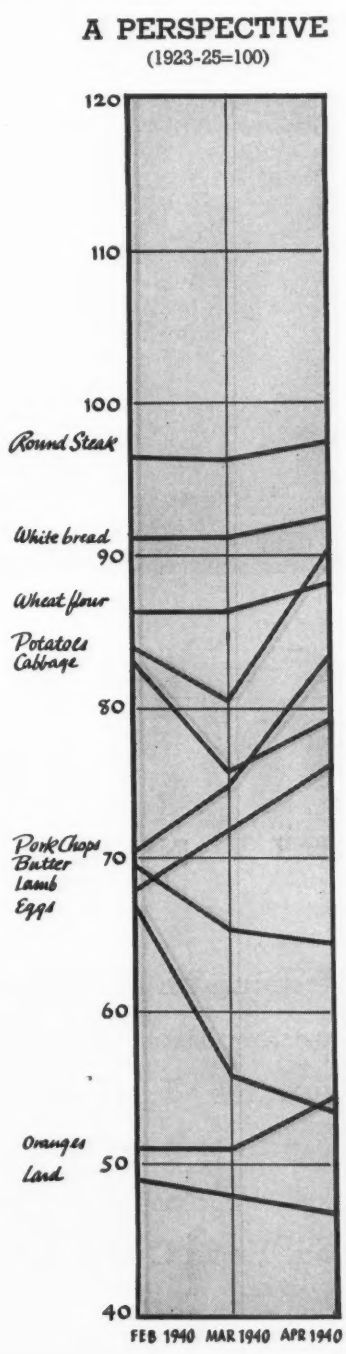
can still cross State lines but must be labeled "Below Standard," and must show the percentage guaranteed to germinate, and the date of the germination test.

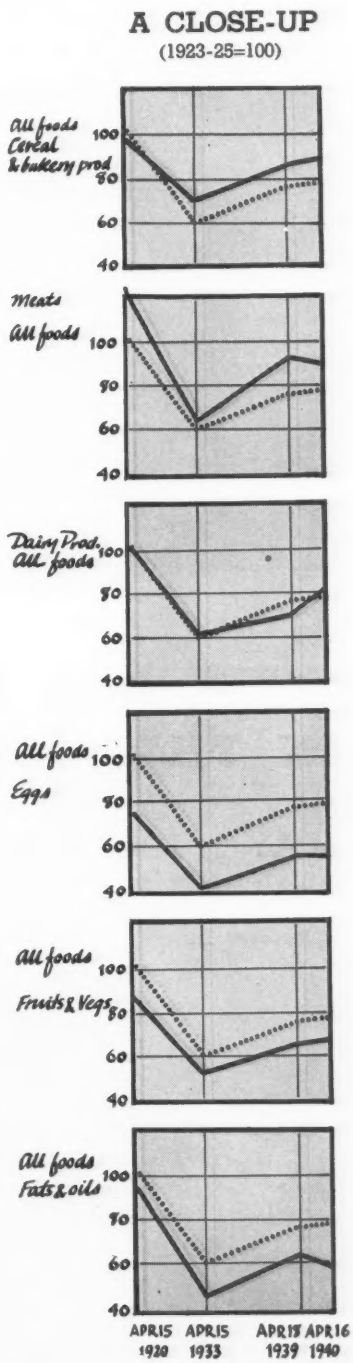
Checking the label guarantees of both domestic agricultural and vegetable seeds is done by the Agricultural Marketing Service much the same way the Food and Drug Administration checks on adulterated or misbranded foods, drugs, and cosmetics. Stiff penalties are provided by the Act for shippers who misbrand their products. The Federal germination test is final in all cases where results fail to agree with the test made by the shipper.

False or misleading advertising of all seeds, domestic or foreign, is barred under the act. That means false or misleading statements in newspapers, magazines, catalogs, over the radio, and in any printed matter.

FOOD COSTS. Retail food costs, which have been moving up and down in seesaw fashion during recent months, jumped up again from March to April. This increase more than canceled the decrease which occurred during the previous month. Even though costs in April were the highest they've been this year, they were low when compared with April levels in recent years. In 5 of the 6 past years, food costs in April have been higher than they were this year.

Advancing prices for fruits and vegetables, particularly potatoes and onions, were the major factor behind the upswing from March to April. But slightly higher prices for beef, lamb, fresh pork, and bread also served to offset price decreases in other food groups. Price drops in most cases were relatively small except in the case of eggs.





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WHAT'S NEW